

**Notice of Allowability**

Application No.

10/758,487

Examiner

Michael J. Feely

Applicant(s)

KURODA, HIROFUMI

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to preliminary amendment filed 4/22/04.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 0104,1004
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## DETAILED ACTION

### *Allowable Subject Matter*

1. Claims 1-21 are allowed.
2. The following is an examiner's statement of reasons for allowance:

Each of the independent claims contains at least the following components:

- An epoxy resin;
- A phenolic resin,
- An inorganic filler; and
- An oxidized polyethylene wax.

At least one of the epoxy resin and the phenolic resin is a phenol aralkyl type having a biphenyl unit in the main chain; and the oxidized polyethylene wax has the following set of properties:

- (1) a drop point with a range of from 60 to 140 degree C;
- (2) an acid value within a range of from 10 to 100 (mg KOH/g);
- (3) a number average molecular weight within a range of from 500 to 20,000; and
- (4) a mean particle size within a range of from 5 to 100  $\mu\text{m}$ .

The following prior art references disclose similar compositions: Kawata et al. (US Pat. No. 6,284,818) – *see column 7, lines 11-15*; Ota (US Pat. No. 6,376,101) – *see column 6, lines 47-58*; Takasaki et al. (US Pat. No. 6,733,901) – *see column 4, lines 46-55*; Ikezawa et al. (Pub, No.: US 2006/0014873) – *see paragraphs 0161*; Ikezawa et al. (Pub, No.: US 2005/0222300) – *see paragraph 0190*; and Ikezawa et al. (Pub, No.: US 2003/0201548) – *see paragraph 0132*.

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All of these references contemplate the use of oxidized polyethylene wax as a releasing agent; however, none of them shed light of the properties set forth in the instant invention.

Another similar prior art reference is Kuroyanagi et al. (JP 10-007888). They also contemplate the use of oxidized polyethylene wax as a releasing agent, and they prefer a *drop point* in the range of 90-130 degree C and an *acid value* in the range of 10-30 (*see paragraph 0041*). However, they fail to shed light on the other properties set forth in the instant invention: number average molecular weight and mean particle size.

In light of this, it should be noted that Applicant has isolated each one of these properties in their working examples (*see pages 25-26*):

- Comparative examples 2 & 3 use a *drop point* below and above the claimed range. The low *drop point* results in poor release properties, while the high *drop point* results in stained molds and molded products.
- Comparative examples 4 & 5 use an *acid value* below and above the claimed range. The low *acid value* results in stained molds and molded products, while the high *acid value* results in poor release properties.
- Comparative examples 6 & 7 use a *number average molecular weight* below and above the claimed range. The low *number average molecular weight* results in poor release properties, while the high *number average molecular weight* results in stained molds and molded products.
- Comparative examples 8 & 9 use a *mean particle size* below and above the claimed range. The low *mean particle size* results in poor release properties, while the *mean particle size* results in stained molds and molded products.

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These experiments demonstrate criticality for all four properties set forth in the instant claims. Therefore, any potential obviousness rejection over the cited prior art is overcome by these showings of criticality.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

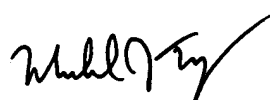
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*Communication*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael J. Feely  
Primary Examiner  
Art Unit 1712

March 20, 2006

**MICHAEL FEELY**  
**PRIMARY EXAMINER**